A DEVELOPMENT MODEL FOR AFNS

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1. This paper stems from the recognition that, though each of us, within AFNS, may have our own views on how development occurs, or should occur, we, as a group, never layed out and agreed upon, a development model that would serve as a base for an AFNS srategy. This void is made more obvious when one tries to operationalize the new mandate, "access to food for the individual", given to us by the 1986 Board of Governors review of our program.

2. This new definition is very thought provoking. It has a number of implcations for AFNS: it could indeed be the base for a new AFNS philosophy and, therefore, strategy. On the most obvious level, it shifts AFNS' focus away from commodities or technologies towards people; second, these terms are not value free: when considering access to food such issues as income distribution and differential access to resources cannot be ignored. In other words, increasing production levels alone does not ensure that more food will be available to people, nor that everybody will be better fed.

3. We are being reminded that a technology is never neutral. Once introduced in a given society, it is a rare case that everybody benefits from it equally. How and by whom it is going to be appropriated, who will benefit from it, etc... depends by and large from the social structures and forces at work between various groups. How the technologies we are helping to develop may exarcerbate social differentiation, especially as far as access to food is concerned, should be an integral part of our preoccupations.

4. To have access to food means either to produce it oneself, or to raise enough income to be able to buy it, which can be achieved through growing and selling cash crops, or through any income generating activity. Furthermore, implicit in the word "individual" is that our focus should be access to food for everybody, not just farmers or rural dwellers. Hence, the new mandate implies that we should not concern ourselves strictly with agricultural activities, nor can we be preoccupied only with farmers . The alternative to growing food oneself, i.e. buying it, implies that food is available in sufficient quantities and quality, either produced locally or imported; and that, through proper transportation, storage and processing, it is made available to the consumer at a price he can afford to buy, or conversely, that the consumer can raise enough income to buy it.

5. Clearly, in this inconspicuous sentence, there is more to it than it first appears. Obviously, it broadens AFNS mandate considerably, to the point that one could wonder if most research programs within IDRC would not be related in one way or another to this new direction. It could also appear that we do not have any focus anymore. However, this little sentence hints at a complete concept of development, which, when explicitly laid out should give us the means to circomscribe our new mandate.

6. Two pilars for a development strategy emerge from the above understanding of our new mandate: food security (different from food self sufficiency) and employment. I would summarize it as a **rural-led employment oriented strategy for development** (see figure). In that model, the renewable resources system (1) is the engine for growth. However, this should not be understood in the sense of what has traditionnally been referred to as agriculture's "contribution" to economic development. In order to highlight the divergence, I shall briefly summarize the objectives that have usually been assigned to agriculture.

7. Agriculture is usually expected to contribute to overall growth in several ways:

a) to provide increased supplies of food and raw materials to meet the needs of the expanding nonfarm sectors;

b) to earn foreign exchange through production for exports;

c) to provide a net flow of capital to finance a considerable part of the investment required for infrastructure and industrial growth; and,

d) to provide a growing market for domestically manufactured goods.

8. Without getting into the abundant litterature that agriculture's failure to meet these objectives has induced, it should be noted that there is an inherent flaw in this scheme: these objectives are inconsistent with each other. For example, policies designed to increase agriculture's contribution to capital formation for the rest of the economy, through varied forms of agricultural taxation (item c) and import substitution policies designed to direct farmers' demand towards locally produced manufactured goods (item d) will reduce farmers income and thereby farmers' investments and incentives that are necessary to meet objectives a) and b). Furthermore, the objective of increasing domestic food supplies may compete with the one of foreign exchange earning through agricultural exports, etc...

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1. For the sake of less awkward reading, I will use the term "agriculture" instead of renewable resources system. Thus, in that sense, agriculture also includes fisheries and forestery. I hope my colleagues from these two programs will allow me this personnal interpretation of technical vocabulary.

9. In this scheme, agriculture is viewed narrowly from the standpoint of supplying the other sectors' inputs and providing an outlet for their output. It is being "used" by the rest of the economy. In contrast, a rural-led employment oriented strategy is based on the recognition of the potentially stimulating role of the rural sector; agriculture is at the core of the development process. Thus the focus is entirely and solely on increasing agriculture's productive capacity, with objective d) following logically or being implied by it. As to objectives b) and c) , they will also come about as a result of agricultural productivity increases.

1Ø. The development process starts with the farmers successfully adopting new or improved technologies which raise land and labor productivity, resulting in increased agricultural production. This increase has a number of direct and indirect implications for the overal development process. On the most obvious level, food intake of the producers themselves is increased, an impact that should not be overlooked, considering that malnutrition, even outside famine periods, is widespread in the rural areas.

11. Again for the direct effects, increased agricultural production provides a stimulus for the development of rural services and agriculture related industrial activities: firstly, investments in new technologies presuppose the purchase of agricultural inputs and equipement; secondly, increased agricultural production creates a demand for processing, storage and transportation services.

12. Far more reaching are the implications of the increase in farmers income. Though relative agricultural prices tend to decline as productivity increases, the fall in prices will be offset by the reductions in the cost per unit of output. furthermore, as we shall see later, increased demand for agricultural products will mitigate the fall in prices. Therefore, the increased agricultural production that results is likely to have a positive impact on farmers' income. Indeed, if it did not, the farmers, who are no fools, will probably not adopt the technology to begin with.

13. Because of the particular expenditure pattern of farmers, this initial increase in incomes sets in motion a sequence of multiplier effects which can stimulate expanded production and employment in other sectors of the economy. A number of studies have shown that, as farmers' income rises, a large portion of the incremental expenditure is allocated to vegetables and livestock products and to locally produced manufactured goods.

14. The demand for nonstaple agricultural products creates an opportunity for rural economic diversification, and, being highly labor intensive, generates employment opportunities for a labor force freed by the productivity gains in agriculture. Furthermore, as these products command high prices, rural incomes are further raised, thereby increasing the demand for locally produced manufactured goods.

15. The consumer goods industries which are stimulated by increased rural incomes are likely to be relatively labor intensive too, The development of these industries therefore creates employment opportunities for the lower-income laboring classes, thereby increasing their incomes. They, in turn spend the bulk of their increased income on food , thereby providing the demand for additional agricultural output and the necessary impetus for continuing agricultural growth. Indeed, without this impetus, agricultural prices may decline sufficiently so as to discourage further transformations of the agricultural sector (par. 13).

16. An adequate and steady supply of food products is a prerequisite for an employment oriented development strategy, the only strategy that can insure that the maximum number of people will have enough income to purchase food. However, with a stagnant agriculture, such a strategy is jeopardized. Without a commensurate increase in the food supply, growth in paid employment, leading to higher incomes and demand for food, will cause prices to rise. This in turn would annihilate the benefits accrued to lower-income people; result in entrepreneurs adopting labor savings devices; and the government to shift to a capital intensive development strategy, admittedly a nonsense in a surplus labour economy.

17. It should be noted that the necessary increase in food supply need not be met through local production alone. Because of the land productivity improvements made possible by the adoption of new technology, export crop production which may be more profitable than food crops, can be fostered, allowing the food demand to be met through commercial imports.

18. An employment oriented development strategy made possible by the modernization of the agricultural sector is all the more desirable in a context where income distribution is severely skewed, a conspicuous feature of most developing countries. The extent to which social inequalities will be reduced depends upon income earning opportunities growing faster than the active population.

19. However, the development model exposed here hinges upon farmer's successfully adopting new or improved technologies, as highlighted earlier. This is probably the major stumbling block, as it presupposes a number of prerequisites:

a) the necessary human and financial investments have been made in agricultural research which is producing technically and economically sound results, appropriate for the particular socioeconomic and physical environment in which the farmers operate;

b) the necessary investments have been made in physical infrastructure (roads, irrigation systems, etc...) as well as institutional infrastructure for servicing agriculture (farmers'training, rural credit, etc...);

c) rural institutions, including farmers'organizations exist and are developed enough to enable farmers to manage the agricultural transformations and be responsible for their own development;

d) there is a secondary and tertiary sector or part of it geared towards servicing agriculture, whether for the supply of inputs or for the transportaion, processing and storage of output; and,

e) policies are designed so as to encourage the adoption of technological innovations in agriculture.

2Ø. Where does the AFNS new mandate stands in relationship to this model? It appears clear that AFNS should be concerned with all the factors that hinge upon farmers successfully adopting new or improved technologies, i.e. items a) to d). As to item e, which is SSD's mandate, we would expect to work in close relationship with them on theses issues, and that the results of our projects serve as inputs for appropriate policy making. Thus a possible interpretation of the new AFNS mandate is to **support the renewable resource production and utilization system,** encompassing the production, marketing, processing and storage of agro, sylvo, pastoral products, and all activities, secondary or tertiary related to the production, processing and storage of these products.

A DEVELOPMENT MODEL FOR AFNS BASED ON "ACCESS TO FØOD FOR THE INDIVIDUAL